

REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks. Claims 1 and 10 have been amended and the amendments to claims 6 are supported by at least the description at page 2, lines 1-15 of the originally filed specification. New claim 13 has been added and is supported by at least the description at page 2, lines 27-30 of the originally filed specification. No new matter has been added.

Drawing Objections and § 112 Rejections

The drawings were objected to under 37 C.F.R. 1.83(a) because the measuring tools recited in the claims were not identified in the drawings. Claim 2 is amended herewith to include reference numbers 12 and 13 directed to measuring tools positioned within the vacuum suction bell 2. No new matter has been added. Withdrawal of the rejection is respectfully requested.

Claim 12 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 12 has been amended to depend from claim 11 and clarify that the vacuum seal is used to maintain a vacuum condition in the vacuum-calibrating bath. Applicants submit that claim 12 is now definite. Withdrawal of the rejection is respectfully requested.

§ 103 Rejections

Claims 6, 7, 10 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 2182603 in view of Carlson (U.S. 4,140,460). Applicant respectfully traverses this rejection.

GB '603 discloses a device that includes a die 11 and a mandrel 12 for the formation of a "bubble" of soft pipe. As shown in Figure 2, the device may include a vacuum chamber 29 positioned between the die 11 and mandrel 12, and the vacuum spray tank 20, and further includes a plate 14 mounted adjacent the die 11 and mandrel 12, and a sizing sleeve 19 positioned in the vacuum chamber 29 adjacent the vacuum spray tank 20. Although GB '603 discloses expansion of a "bubble" 22 in the vacuum chamber 29 using a vacuum condition, GB '603 fails to disclose a "extrusion cap being adjustable to vary the thickness and diameter of the melt column ... and a change in the vacuum condition changes the thickness and the outside diameter of the melt column in a controlled manner based on the measured outside diameter of

the melt column determined by the measuring tools," as required by claim 6. GB '603 fails to provide any disclosure or suggestion of adjusting both the thickness and outer diameter of the melt column using an extrusion cap and a vacuum condition in a vacuum chamber. Furthermore, GB '603 fails to disclose a vacuum chamber that includes "measuring tools configured to determine the outside diameter of the melt column," as required by claim 6.

Carlson discloses a blown plastic film process that includes tube diameter sensors 21 preferably positioned at 180 degrees around a blown tube so as to detect variations in the tube diameter and to distinguish changes in the tube diameter from displacement from side to side of the tube as whole (see column 3, lines 9-20 of Carlson). However, Carlson fails to disclose or suggest "an extruder having an adjustable extrusion cap ... being adjustable to vary the thickness and diameter of the melt column," or "a vacuum chamber providing a vacuum condition ... and a change in the vacuum condition changes the thickness and the outside diameter of the melt column in a controlled manner based on the outside diameter of the melt column determined by the measuring tools," as required by claim 6. Therefore, neither GB '603, Carlson, nor a combination of these references disclose or suggest every limitation of claim 6, and the claims that depend from them. Withdrawal of the rejection is respectfully requested.

Claims 8 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over GB '603 in view of Carlson, and further in view of Sweeney, U.S. 4,355,966. Applicant respectfully traverses this rejection. As discussed above, GB '603 and Carlson fails to disclose or suggest every limitation of claim 6. Sweeney fails to remedy the deficiencies of GB '603 and Carlson as they relate to claim 6. Therefore, claims 8 and 9 are allowable for at least the reason they are dependent upon an allowable base claim. Applicant does not otherwise concede the correctness of this rejection.

Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over GB '603 in view of Carlson, and further in view of Loc et al. (U.S. 4,750,873). Applicant respectfully traverses this rejection. As discussed above, GB '603 and Carlson fail to disclose or suggest every limitation of claim 6. Loc fails to remedy the deficiencies of GB '603 and Carlson as they relate to claim 6. Therefore, claim 12 is allowable for at least the reason it is dependent upon an allowable base claim. Applicant does not otherwise concede the correctness of this rejection.

New claims

Claim 13 has been added and includes many of the limitations of claims 6-12, and further requires that "a position of the extrusion cap, the vacuum condition, the predetermined diameter, and the size of the vacuum seal are each automatically controlled in response to the measurement signal." Applicant submits that none of the art of record, alone or in combination, discloses or suggest this limitation of claim 13. Therefore, Applicant requests consideration of allowance of new claim 13.


In view of the above, Applicant requests reconsideration of the application in the form of a Notice of Allowance. If a phone conference would be helpful in resolving any issues related to this matter, please contact Applicant's representative below at 612.371.5265.

Respectfully submitted,

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